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ABSTRACT

The use of undergraduates (N=57) working on a one-to-one basis with delinquent youths as the change agents in a nonprofessional program which systematically varied training/supervision/intervention components was investigated. Students and delinquents (N=73) were randomly assigned to one of four experimental training/supervision conditions or to a control group. Process interviews were conducted to determine what transpired in the 18-week intervention. The impact of the training/supervision segment on the actual intervention and the relationship between the intervention activities and successful youth outcome, based on official recidivism and school performance data, were determined. Results indicated that understanding how training/supervision is applied to the intervention situation by the nonprofessional, and how separate components differentially affect outcome, is important in determining the overall effect of any intervention. (Author)

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The Effect of Training/Supervision of Nonprofessional Interventions with Delinquents[1,2]

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The Effect of Training/Supervision of Nonprofessional Interventions with Delinquents

The last two decades have seen a rapid increase in the numbers of programs using paraprofessionals. In fact, the use of nonprofessionals and volunteers has been a major characteristic of the development of the community psychology movement (Rappaport, 1977; Heller & Monahan, 1977; Nietzel, Winett, MacDonald, & Davidson, 1977). Early reviews of the research in this area were positive, spurred by such controversial studies as Poser (1966) and Rappaport, Chinsky and Cowen (1974), but noted the preponderance of simple outcome studies and the need for systematic research during the 1970's. The majority of the more recent non-professional studies have continued to look at basic outcome questions rather than at separation of program components, e.g., training, supervision, intervention strategies--and have done so without using objective measures from the perspective of target groups (Rappaport, 1977; Zimpfer, 1974). In fact, training, supervision, and intervention variables have often been so confounded that the differential influence of various nonprofessional program components could not be determined.

Since the early enthusiasm about the use of nonprofessionals in various social problem areas there has been a paucity of research surrounding either basic outcome or differential efficacy dimensions. Enthusiasm for nonprofessional programs continues to run high and the number of programs continues to increase. However, conclusions about paraprofessional effectiveness have often been based on programs in which numerous variables, such as the content, format and amount of training, supervision, and intervention were highly confounded. As well, the evidence that has been obtained is often indirect, subjective in nature, and not drawn from rigorous research designs. In addition, a significant lack in research to date has been the inclusion of variables from the perspective of the recipients of nonprofessional intervention.

The typical program reported in the literature has been monolithic in its intervention focus and rather narrow in the dependent variables examined. For example, the major "schools of thought" regarding change tactics have all appeared in the nonprofessional literature. These have included the use of essentially "untrained" college students, use of college students trained in Rogerian based skills, nonprofessional behavior analysts, and more recently hordes of child advocates. The relative effectiveness of such procedures and the salient processes had been entirely ignored.

The aim of the current study was to present preliminary findings which will examine and contrast the effects of four different strategies of training/supervision/intervention used within the context of a diversion program for juvenile delinquents. Multiple measures were used to examine issues related to the results of these training intervention and supervision strategies. A critical component of the study was the development of process measures which included data from the recipients of the nonprofessional intervention. The major issue examined in this study was a description of the performance of student volunteers trained in four different intervention modalities. The central focus was the actual performance of the students in the naturalistic setting rather than in a laboratory analogue. The four specific models to be compared involved high intensity training in the methods of behavioral contracting and child advocacy, high intensity training in the methods of relationship skills, low intensity training accomplished in large groups, and low intensity training accomplished in small groups. Obviously at issue were the format (intensity) and content of training. A second major focus of this study was the development of interview based process measures for examination of the actual interventions provided by the student volunteers.

METHOD

Context of the Research

This study took place within the context of a larger research project funded by the National Institute of Mental Health. The overall project has been in formal operation for approximately two years and is aimed at replicating and experimentally examining the effectiveness of a specific diversion program for delinquent youth (Davidson & Rapp, 1976; Davidson & Rappaport, 1978; Davidson, Seidman, Rappaport, Rapp, Berck, Rhodes, & Herring, 1977; Seidman, Rappaport & Davidson, 1976). The overall operation of the project involved college students working on a one-to-one basis with youth diverted from a local juvenile court. The overall research project examined such components of the diversion model as the degree of involvement of the youth in the juvenile justice system at the time of referral, characteristics of the college students, selection of nonprofessionals, and the scope of the intervention approach.

The entire program operated under the educational pyramid model prescribed by Seidman and Rappaport (1974). The principal investigator supervised, trained, and consulted with nine graduate and two undergraduate students who have the responsibility for training and supervising small groups of undergraduates and for coordinating project research. The nonprofessional training and supervision segment of the project was a formal three term undergraduate psychology course at Michigan State University.

In addition to the project's relationship with the University and the Department of Psychology, there were close ties with the local juvenile justice system. The local juvenile court currently handles approximately five to six hundred youthful offenders annually. It is from this project group that referrals were made.

Seventy-seven delinquent youth were referred to the project from October, 1977 through January, 1978. Four of the youth decided that they did not want to

participate. Those youth who decided to voluntarily participate in the project had the following demographic characteristics: 62 males and 11 females; 51 whites and 22 nonwhites; the average youth was in the ninth grade with a range of 5th to 12th; 65% of the youth came from broken homes; and the average age was 14.3. Criminal activities ranged across the full spectrum, but tended to be nonserious and serious misdemeanors and nonserious felonies. There were no status offenders among the group referred to the project. There were no significant differences among the youth assigned to the four experimental conditions or the control group on any of the demographic variables.

Subjects

Delinquent Youth

Stratified by court referee, race, sex, formal/informal handling, in order of referral, the 73 youth who volunteered to participate were randomly assigned to one of the four experimental groups or to a control condition (control subjects were not at issue in the portion of the research reported in this paper). At the outset, 14 youth were assigned to the High Intensity/Behavioral Contracting/ Advocacy Condition, 13 to the High Intensity/Relationship Condition, 15 to the Low Intensity/Small Group Condition, 16 to the Low Intensity/Large Group, and 16 to the Control Condition. There were no significant pre differences on any of the variables used in the overall study between the five groups. For the particular aspect of the overall research reported in this paper, the 57 experimental youth are of concern. Of the 57 experimental youth, 54 were available for complete interview data collection during the study. The attrition of three subjects occurred at a rate of one each in three of the experimental conditions and was a result of inaccessibility to the interviewer.

Nonprofessional Volunteers

The nonprofessional volunteers used in this study were selected from a large group of undergraduate college sophomores, juniors, and seniors. In the spring of

1977 a letter was sent to 3,500 undergraduate social science majors at Michigan State University. This letter informed them of the possibility for participation in the project, provided a brief description of the program, and invited them to call the project office if they were interested. From this number, approximately 400 called the project office and expressed interest in participation. Of the group that called, 300 attended an initial meeting. This initial meeting was for the purpose of describing in more detail the expectations for project involvement and the requirements for participation in the three term course sequence. At the end of this session, approximately 220 students agreed to proceed in the selection process. Following the initial meeting, potential volunteers were required to return for an additional assessment session. This second meeting consisted of having the nonprofessional volunteers complete approximately three hours of paper and pencil measures being used as part of the selection and student outcome aspects of the research. 130 nonprofessional volunteers completed this entire process and were eligible for project participation. Of the 130, 57 were randomly selected for participation in the four experimental conditions. The 57 student volunteers were assigned to the four experimental conditions randomly with stratification for sex. Comparison of pre measures on over 70 variables failed to reveal significant differences in any of the four groups above what would have been expected by chance.

Trainers/Supervisors

There were ten trainer/supervisors involved in the training and supervision of the students in the four experimental conditions. Seven of the trainer/supervisors were advanced graduate students in psychology with major interests in the area of community/clinical or ecological psychology. The eighth trainer/supervisor was a senior majoring in psychology. This individual has been a nonprofessional volunteer in previous phases of the project and had also served in other research assistant roles. These first eight trainer/supervisors were responsible for

conducting the training and supervision groups in the High Intensity Behavioral Contracting/Child Advocacy Condition and Relationship Skills Condition.

The ninth and tenth trainer/supervisors were responsible for conducting the two Low Intensity Conditions. One of these two was a senior majoring in social work who was a staff member for the Student Volunteer Bureau at Michigan State University. She had been a volunteer and volunteer student coordinator, assuming management responsibilities, at a shelter residence for delinquent and abused children. In addition, she had done field placement work in the child care area. The second Low Intensity trainer/supervisor was an advanced graduate student in social work with major interests in program planning and administration. She had been a student volunteer in a number of programs, a staff member in a youth service bureau, and the director of volunteer in court program. During the year in which she served as a trainer/supervisor for the project, she also served as a staff volunteer, directing several programs for the Michigan State University Volunteer Bureau.

All trainers and supervisors in the high intensity classes (both relationship skills and contracting/advocacy) were assigned to condition by choice. In addition, the particular skills and background of the trainers and supervisors were taken into account in assigning them to experimental conditions. The background and experience of the trainer/supervisors for the two low intensity conditions were particularly relevant since they had the type of program experience that this study was attempting to duplicate in the low intensity conditions.

Research Design

The aspect of the research reported here included a single experimental design. In order to examine questions concerning the impact of training/supervision/intervention condition throughout the project's experience, the research design was a four x three design with repeated measures. The two dimensions were training condition (four) x time (six weeks following referral, twelve weeks following

referral, and termination--18 weeks following referral). Process interview measures, to be described in a later section, were administered to referred youth, their parents, nominated peers, and their assigned volunteer at each of the three time periods. In addition to this basic four x three design, an additional dimension, success/failure, resulted in the four x three x two analyses to be presented in this paper.

Procedures

Referral of Delinquent Youth

Youth were referred to the diversion project by the intake staff of the local juvenile court. The agreement that the project had with the staff was that they would refer youth to the project for whom they would otherwise consider for "formal" processing. In other words, the intake staff agreed that they would not refer youth to the diversion project who would otherwise be warned and released. At the other end of the spectrum, the court staff did not refer serious offenders (major crimes against person) to the project. After the decision was made to divert the youth to the Adolescent Project, the court referee briefly explained the program to the youth and his/her family. If the youth and the family were interested in considering the diversion project as an option, a referral interview was set up for them with the project staff. During this initial interview, the program was explained in detail, the methods of assessment involved outlined, the random assignment procedure described, etc. After completing this introductory material, the youth and the parents were asked if they were willing to participate. Assuming that they voluntarily agreed to participate in all aspects of the project, they committed themselves both verbally and in writing. Following the completion of the voluntary participation procedures, they were assigned to one of the four experimental conditions or the control condition according to procedures described in the Subjects section.

Training/Supervision/Intervention Conditions

Students assigned to all experimental groups received four academic credits per term for the 1977-78 academic year. They were required to attend all supervision sessions scheduled for their particular training/supervision condition, to hand in weekly progress reports, to keep an event logbook--a running account of contacts between the youth and with others on behalf of the youth--to participate in assessment procedures and the process interviews described below throughout the three terms, and to meet with their youth six to eight hours per week for eighteen school weeks. Grading for the class aspect of the project was based on case responsibility, class attendance, case presentation, class discussion, and following ethical standards.

High Intensity training/supervision/intervention. Each of the four High Intensity classes (two High Intensity Contracting/Advocacy, two High Intensity Relationship Skills) were composed of seven students and two graduate student trainer/supervisors. Each supervision session met for two hours per week. The first eight weeks of the Fall term of 1977 were designated as a formal training segment with students working through programmed manuals, outside readings, and in class demonstrations and role plays (detailed descriptions of these procedures and manuals available from the authors upon request). Mastery of the subject matter was demonstrated on oral and written weekly questions.

After the training component was completed, the classes were used as general case supervision sessions. Students were assigned cases as early as the fourth week of training and others were not assigned to cases until six weeks following the completion of training. The structure, general format, and class size of the two High Intensity conditions was similar. However, the content of training/supervision/intervention and the resulting impact on supervision philosophy and intervention execution was very difficult. The two particular subsets of high intensity training/supervision/intervention are described below.

a) High intensity conditions--contracting/advocacy. Students in this condition were trained in the use of skills generally described as child advocacy (Davidson & Rapp, 1976) and behavioral contracting techniques (Stuart, 1971). The training sessions (eight weeks) for this condition included the following eight units: (1) an overview of the course, the juvenile justice system, and the theoretical rationale behind behavioral conceptions of human behavior; (2) the theoretical rationale underlying the child advocacy conception of human behavior, rationale for using a combined advocacy and contracting approach; (3) a brief description of initial meetings between students and youth; a description of indepth behavioral and advocacy assessment; a description of modes for collecting assessment information on the youth's interpersonal network; methods for collecting information relevant to the unmet needs of the youth and determination of available community resources; (4) outside homework assignments and in class role plays descriptive of behavioral assessment methods, demonstration of methods for advocacy oriented assessment; (5) methods for selection and initiation of intervention strategies, strategies for negotiating contracts, demonstration of the mediator role, selection of an advocacy strategy and target; (6) practice assignments, role play, and demonstrations of contracting and advocacy intervention approaches; (7) strategies for monitoring the effects of contracting and advocacy interventions; (8) preparation for termination training, description of practice sessions to be used with referred youth and significant others.

Once the eight weeks of training were complete, the two hour weekly class sessions were spent in case supervision. These case supervision sessions consisted of sequential presentation of each nonprofessional volunteer's case progress. Supervisors and classmates assisted in a general problem solving format group discussion including clarification of goals, review of technqiues, and specification of future plans. The interventions to be implemented by students in this

condition were expected to follow the steps outlined and modeled in the training and supervision segment. In short, the intervention was to proceed through the phases of assessment, contracting and advocacy intervention, monitoring, and termination. The High Intensity Child Advocacy/Behavioral Contracting Condition is a direct replicate of intervention procedures which have demonstrated to be successful in previous research by the second author (Davidson et al., 1977).

b) High Intensity--Relationship Skills Condition. The second high intensity training/supervision/intervention condition used a relationship skill approach. Design of this condition was parallel in format to condition "a" described above, except that the training and intervention approach taken was that of relationship skills (Carkhuff, 1969; Egan, 1975; Goodman, 1971). The training segment for this condition was parallel to that for condition "a" and included the following eight units: (1) an overview of the course, a brief history of the juvenile justice system, and a rationale for diversion; (2) theoretical rationale for the essential ingredients of the therapeutic relationship including empathy, nonpossessive warmth, and genuineness; (3) a brief description of initial meetings between the student and youth, emphasis on skills for enhancing comfortableness, trust, etc., and the role of crises in developing and maintaining relationships; (4) the role of self-understanding and the importance of knowing and accepting feelings in intervention, the rationale for empathy skills and practice sessions and role plays in feeling identification and feeling oriented responses; (5) practice assignments and role play sessions on the skills of clarification and paraphrasing, and a description of commonly occurring errors; (6) the role of openness in relationships, the skills of behavioral description, feedback and confrontation of discrepancies; (7) the importance of the facilitation of autonomy, the problem solving process, the definition of problems and goals, and methods for the discussion of alternatives; (8) a summary of the model including an overview of the total problem solving process and the components of termination.

The case supervision structure parallels that of condition "a". Namely, the two hour weekly sessions for the remainder of the three terms were used for the supervision of cases. The focus throughout was on helping the students implement an intervention based on relationship skills during the eighteen week intervention period.

Low Intensity training/supervision/intervention. There were three low intensity classes. The two with seven students comprised the Low Intensity Small Group Condition. The third, with 15 students, comprised the Low Intensity Large Group Condition. In many ways, these two conditions modeled the type of training/supervision/intervention often presented in volunteer in court type programs. "Court volunteer training is rarely elaborate, intensive, or formal. The average seems to be about five to ten hours, spread out over two or three consecutive evenings in one week or once a week over several weeks (Scheier, 1971, page 74)." From another point of view, these two conditions represent attention placebo control for the first two conditions.

c) Low Intensity--Small Group Condition. The training phase of this condition included three initial orientation meetings, held weekly during the first three weeks of the Fall term, 1977. The orientation meetings were primarily didactic in nature. The first meeting provided a general introduction to the course, the requirements for in class and field work experience, an overview of the project, and a rationale for diversion. The second meeting involved a lecture by the trainer/supervisors on prominent theories of juvenile delinquency in the juvenile justice system and their practical implications. The theories that were covered included differential association, intrapsychic explanations, interactionist positions, environmentalist positions. This was followed by a detailed description of the juvenile court system in the local community. In the final portion of the second meeting, the mechanism for assigning youth to a student were presented and a brief discussion for initial contacts took place. In the third meeting,

several specific topics were discussed. First, there was a general discussion of the kinds of activities that students could engage in with their assigned youth. This included getting to know the youth and their problem areas, and determining how to make changes and solve identified problems. The emphasis throughout was on the students using their "naturally occurring" skills in order to facilitate change. In addition, the availability of information on services in the local community was described. The necessity of being supportive and "hanging in there" with the youth, even when things got difficult, was emphasized. In addition, the rationale for the importance of the eighteen week time frame and preparation for termination were stressed.

Supervision sessions in the Low Intensity Small Group Condition were two hours in length and held on a monthly basis following the initial three orientation meetings. They were run by the two trainer/supervisors. The overall philosophy in supervision was that the interest, commitment, and high level of motivation and enthusiasm of the volunteers could have a positive impact on youth without the need for more specific skill oriented training. Not providing a specific intervention plan allowed the opportunity for the nonprofessional volunteers to try out what they felt was useful, to be maximally free and flexible in whatever they chose to do, thus using the natural skills which they possessed when they came to the project. Supervision sessions were a time for idea exchanging, holding group problem solving sessions, and for dealing with routine administrative matters. The supervision style adhered to in these sessions was nondirective in nature. Questions raised were explored by the class as a whole. The supervisor's task was to summarize and integrate the discussion and reflect the comments and questions of the students. The students were encouraged to try out various alternatives in the actual intervention with the youth.

d) Low Intensity--Large Group. The Low Intensity Large Group Condition was an attempt to examine the effects of carrying on nondirective training in a large

group. This was an attempt to reflect the size of group often used in typical community volunteer programs. The low intensity/large group consisted of 15 students meeting together in both the training and supervision segments. The procedures followed in the low intensity large group condition mirrored those followed in condition "c" above.

Measures

Delinquent youth. While a large number of outcome variables were gathered from archival sources in the larger project of which this study is a part, two particular measures are relevant. As described in the section on design, the performance of student volunteers was examined in relationship to condition, time, and success/failure. In order to determine a success/failure categorization, police and court records were used. The frequency of police contacts and juvenile court petitions were recorded for all youth for one year prior to the project and at varying followup intervals. For purposes of this substudy the police and court records collected for the time period during which the youth were involved in the project are of interest. Namely, youth were categorized as success cases if they did not have either a police contact or court petition during the time they were involved in the project. Failure cases were defined as any cases in which there was a police arrest or juvenile court petition.[3]

Process interviews. Process interviews were conducted for the overall research project at three times during the course of a youth's and student's involvement. This provided a detailed participant oriented monitoring of the events that occurred as a result of the training/supervision/intervention conditions. As mentioned earlier, the three time periods were six weeks, twelve weeks, and eighteen weeks following the matching of a student and a referred youth. These interviews were held with the target youth, one of his/her parents, a nominated peer (specified by the youth as a close friend), and the assigned volunteer.

The development of process interview scales was aimed at increasing our empirical understanding of the operation of the program and its relationship to critical life events from the perspective of program participants. As such, a sequential scale development procedure was undertaken which involved the generation of behaviorally specific items from the perspective of program participants (youth, parents, nominated peers, and student volunteers). Following the construction of such an item set, the resulting data were submitted to a sequential rational/empirical scale construction procedure. The result was a series of scales reflective of the major characteristics of the intervention.

In the spring of 1977, fifteen interviewers were recruited to carry out the process interviews during the phase of the research reported here. These interviewers were given six weeks of training in interview procedures. This included familiarizing them with the basic purpose of process interviews as a strategy of gaining participant relevant yet behaviorally specific data on the operation of the project. Next they were introduced to the item set (220 items) which had been developed in earlier phases of the research. They then were instructed in interviewing tactics to be used. This consisted of verbal instruction by two graduate assistants in charge of process interview research components, demonstration of interview strategies through tapes of previous interviews, role plays and training sessions, and finally practice interviews with their roommates and youth recruited from the local community. All practice interviews were audio taped and formed the basis of feedback from interview supervisors.

Following the training, the interviewers were assigned to cases to conduct the actual interviews. Interviewers were responsible for interviewing the youth, parent, peer, and volunteer within each case they were assigned. As indicated earlier, the interviews took place at six week intervals during a youth's eighteen week involvement with the project. Four complete sets of interviews were completed with two interviewers present in order to assess inter-interviewer agreement. Over all sources of information, at

all time periods, and on all items, the interviewer pair showed a 70% level of exact agreement demonstrating the interviewer reliability of the interview data.[4]

The intervention items were submitted to a rational empirical strategy of scale construction (Jackson, 1971). This involved initial rational groupings of the item scale in the intervention area. The internal consistency of these rational groupings was then determined according to two criteria. First, in order for an item to remain on its scale, it had to show a significant correlation with the sum of the other items on the scale. Second, the item had to demonstrate a significantly higher correlation with its own scale than with other scales in the intervention domain. If it showed a greater degree of convergence with another scale it was moved if it made rational sense. Otherwise, the item was discarded from futher analyses. This rather lengthly process of scale construction produced scales which were maximally reliable and maximally orthogonal. As a result of this process the scales described in Table 1 were developed. Table 1 presents the conceptual content of the items on each scale, the number of items on the scale, and the alpha coefficient (a detailed presentation of the scale construction process is available from the authors upon request). The final step in the scale construction process was to examine the convergent and discriminant validity of the above described scales. The multitrait multimethod matrix prescribed by Campbell and Fiske (1959) was used to examine the convergence of scales across data source (i.e., youth, parents, peers, and volunteers). In short, this process resulted in scales which showed excellent convergent discriminant validity properties. As a result, final scale scores were summed across data source resulting in a single score on each of the fourteen scales for each subject at each time period.

Insert Table 1 about here

RESULTS

Given the large number of dependent measures described in the Methods section and the preliminary nature of the study being reported here, only a sample of the

results will be reported in detail. Results from the remainder of the process interview scales will be described verbally. A detailed analysis of variance and figures representative of mean levels will not be included due to space limitations. Overall strategy for analysis of process interview scales was a four x three x two analysis of variance with repeated measures. Each of the process interview scales was analyzed by condition, success vs. failure, and time using complex analysis of variance with repeated measures. In addition, planned comparison Scheffe tests were used to examine group mean differences of particular interest. Again for purposes of brevity and clarity, exact F statistics for Scheffe multiple comparisons will not be provided, all Scheffe comparisons described can be assumed to reach the .05 level of significance. The results will be organized in two subsections. The first will present the results on the three condition-specific scales. These will include the Adherence to Behavioral Contracting Model Scale, the Adherence to Child Advocacy Model Scale, and Adherence to Relationship Skills Model Scale. In addition, the results of the Volunteer/Target Involvement Scale will be presented. The next section of results will include a verbal description of other analyses of interest.

Tables 2, 3, and 4 provide the results of the complex analysis of variance for the Adherence to Behavioral Contracting Model scale, the Adherence to Child Advocacy Model scale, and the Adherence to Relationship Skills Model scale, respectively. In addition, Figures 1, 2, and 3 present a graphic description of the means for each of the groups by time period. The interesting findings from these three scales are twofold. In the first instance, it is obvious from the analyses of the Adherence to Child Advocacy Model and the Adherence to Behavioral Contracting Model scale, that there were major differences between the Child Advocacy/Behavioral Contracting Condition and the other three experimental groups. In both instances, there are large effects for experimental condition.

Insert Tables 2, 3, and 4 and Figures 1, 2, and 3 about here

From Scheffe multiple comparison examination of means, it is obvious that the majority of these effects are atrributed to differences between the Behavioral Contracting/Child Advocacy group and the other three experimental conditions. In fact, these results are accentuated between the Advocacy/Contracting group and the relationship skills group. This represents a demonstration of the degree to which nonprofessional volunteers in condition "a" adhered to the training/supervision/intervention model from the perspective of program participants. Also of interest on the Advocacy and Contracting scales are the differential patterns of model adherence demonstrated by success vs. failure cases. In both instances it appears that failure cases received higher levels of the model intervention particularly at time periods two and three. In examining the relationship between these results and outcome recidivism results, it seems safe to suggest that these increased levels of model adherence are in response to official recidivism among cases in those conditions. It does not appear to be the case that these groups received significantly higher levels of model intervention prior to officially recidivating.

Somewhat more surprising are the results on the Relationship Skills scale. In this instance, there are no differences between groups that are statistically reliable. In fact, there is a general increase (demonstrated by Scheffe multiple comparisons) in the relationship scale among all groups regardless of condition or success vs. failure distinction.

While these three scales represented "manipulation checks" and model adherence, a number of the other scales reflected additional salient dimensions of the intervention process. At the most general level was the Volunteer/Target Involvement Scale reflective of the intensity of the interaction between the nonprofessional volunteer and their assigned student. Table 5 presents the complex analysis of

Insert Table 5 about here

variance for the amount of time scale and Figure 4 presents graphically the means for the same dimension. As can be seen from Figure 5, in combination with the analysis of variance, there is a general trend to reduce the amount of time spent in the intervention over the duration of the eighteen week interval. This is

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Insert Figures 4 and 5 about here

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most characterized by three out of the four failure groups and most dramatically in the relationship failure group. The success groups, without exception, show a relatively stable level of involvement over time.

To summarize the major findings presented here before proceeding to a somewhat more general description of other results, it should be noted that both the highly specific manipulation check scales and the most general amount of time spent scale produced some very unexpected results within a classic experimental paradigm. It has been observed that model adherence must necessarily be monitored since one cannot assume that the generally high levels of adherence demanded by experimental paradigms will necessarily be adhered to in the face of real life situations. In addition, at the most general level of amount of time spent in intervention, consistency is also not demonstrated in the face of official recidivism.

Additional findings of interest from similar analyses of the intervention scales were observed in several areas. On other scales unrelated to the intervention model, some intriguing results occurred. In the area of parental involvement, as might be expected, the Child Advocacy/Behavioral Contracting group showed the highest level of Parental Involvement. It should be remembered that these items are not necessarily reflective of Parental Involvement for specific change purposes, but can include such things as the frequency of talking to the parents and involving them in the general intervention plan without attention to change relevant specifics. The other main finding of interest on the Parental Involvement Dimension is that the relationship condition, as would also be expected,

demonstrated the lowest level of involvement of parents in the intervention. In the Recreational Activities scale, a somewhat different pattern resulted. On the one hand, it is again the case that the success group showed a moderate and stable level of recreational activities as does the Child Advocacy/Behavioral Contracting failure group. However, other failure groups, most notably in the Relationship condition, show a dramatic decrease over time. Again, in these two somewhat general areas of description of intervention process, we have seen a good deal of effect for training condition and an interaction of intervention process with real life events.

In a somewhat different area, the legal intervention scale, a rather dramatic pattern of results was demonstrated. All failure groups, with the exception of the Relationship Skills failure group, showed a dramatic and statistically significant increase in Legal System Involvement Scale. The Relationship failure group did not demonstrate this pattern. Again, this is as might be expected since legal intervention was primarily a reactive area for a diversion program. Specifically, when faced with youth officially recidivating, the volunteers expended a good deal of their intervention effort in the direction with dealing with the juvenile justice system.

Three other salient features of the intervention deserve attention. First, in the area of Family Intervention: Focus on Changing Parents focused on changing the parents, there was a significant effect for group. Again, as might be expected, it was consistently the case that the Behavioral Contracting/Child Advocacy group, regardless of success/failure distinction, showed the highest level of Family Intervention Focused on the Parents. Second, in the area of School Intervention: Focus on Changing the Youth, a somewhat different pattern of results emerged. Again, the Behavioral Contracting/Child Advocacy group showed relatively high levels of involvement in this area as do two of the Low Intensity

groups. However, the Low Intensity groups tended to get involved in this area only in reaction to failure. The Relationship Skills group, as would be expected from training, did not involve themselves significantly in school intervention. In the third and somewhat different conceptual area, School Intervention Focused on Changing the School, an additional interesting set of results come forth. Again, as would be expected, the Behavioral Contracting/Child Advocacy group showed the highest levels of activity in this area. The Relationship group, regardless of success vs. failure distinction, failed to involve themselves in school change to any significant extent. Both Low Intensity groups, in the face of failure, show minimal levels of involvement in School Change activities while the Low Intensity success groups do not involve themselves in this area at all.

DISCUSSSION

Prior to discussion of these results, some introductory comments are in order. First, it is to be remembered that the results reported are preliminary in nature. They are a subset of a large longitudinal study currently being conducted by the authors. As such, they represent the development of a useful process monitoring methodology, and have highlighted some salient features of intervention process indicative of the need for carrying out such process monitoring assessments. While strict adherence to complex statistical procedures and traditional multiple comparison verification of results has been adhered to, the tentativeness of the results reported cannot be overemphasized.

The results from the three scales designed to monitor the intervention models from the perspective of program participants indicated that in the case of Adherence to Behavioral Contracting and Child Advocacy Model, there was considerable difference between experimental conditions. It appears obvious that people receiving specific training and supervision in behavioral contracting and child advocacy

are in fact the only nonprofessional volunteers to execute these skills to any degree. In the case of the Relationship Skills scale, a somewhat different set of results emerges. Namely, there did not appear to be significant differences between training conditions on this dimension. Two possible explanations for this received support from our own experience and from the literature. On the one hand, it is possible that the use of relationship based intervention modalities with delinquent groups is extremely difficult. However, given the level of relationship interventions observed, it seems more plausible that all groups were able, even without specific training, to carry out interventions with an acceptable level of relationship skills as an undergirding. The fact that essentially untrained college students possess high levels of such skills has been demonstrated by other authors (Poser, 1966; Rappaport et al., 1974; Goodman, 1971).

The obvious importance of data resulting from such process scales in monitoring the intervention model cannot be overemphasized given the above. Within the traditional experimental paradigm, given the degree of reasonable control and manipulation executed in this study, without such process monitoring checks, it would have been assumed that all groups did what they were trained or not trained to do as specified by the experimental design. If we are to begin the process of understanding the salient processes of intervention programs such as that described here, the need for such assessments seems crucial.

The above point is further emphasized when the results of a general scale such as the Volunteer/Target Involvement are examined. As was described in the results section, groups differentially trained, particularly in reaction to official recidivism, tend to show dramatically different levels of time spent in the intervention. Given the scale levels demonstrated, the range involved is from six to eight hours a week to two to three hours a week at various time points by various groups. This effect was obviously the most dramatic in the case of the Relationship

condition. The people in the Relationship Skills condition had essentially been trained in the development of a Relationship Skills intervention to be carried out between themselves and the youth only. This training was to the exclusion of (in fact restricted them from) direct interventions in other life areas. As could be seen from the other general results described, the Relationship group tended not to involve themselves in the areas of parents, the home, or school. As a result, those who were faced with failure, essentially stopped carrying out the intervention model since it did not fit with the real life events they were encountering.

A second major area exemplified by the study presented here, is the feasibility of carrying out participant or consumer oriented assessments which are on the one hand open-ended and descriptive in their nature yet on the other hand psychometrically sophisticated. A major thrust of the community psychology movement has been the importance of examining the processes and effects of social programming from the perspective of participants. However, to date, few systematic efforts at the development of methodologies for participant or consumer oriented domains have been presented. The current study included a highly descriptive approach to the development of such measures. It was clearly demonstrated that such procedures can be developed in ways which may ultimately alter the conclusions of evaluations concerning social programs. At this point in our research, it is safe to say that they will enrich the network of information available and allow us to proceed more intelligently in our experimental outcome comparisons.

A final point which needs re-emphasis is the importance of examining the interplay of social programs with real life events. The case in point in the study presented here is the effect of official recidivism (i.e., reinvolvement in the juvenile court system) on the actual execution of the intervention models. The common sense analogy that many of us have experienced during formal training in particular social innovations is the response "but it doesn't really work that

way". Some of the data presented here in fact demonstrate that phenomena empirically. In several of the intervention domain areas it was clearly and significantly demonstrated that a critical event, such as official recidivism, can dramatically alter a very simple intervention program that is carried out between a nonprofessional student volunteer and a single delinquent youth. The effects of similar phenomena in other social program areas has only recently received attention. It is likely that there is a rich network of relevant information of both an experiential and empirical nature available in monitoring such events. Other aspects of our own research are attempting a more fine grained analysis of such phenomena by examining specific life events surrounding the referred youth in relationship to the project, its processes, and ultimate success.

In conclusion, the current study has highlighted the need for particpant oriented process monitoring within the context of community oriented social innovations. A number of results indicated the degree to which the social innovation model was actually carried out, its interaction with critical life events, and their relationship to ultimate outcomes. In addition, the current study has demonstrated the feasibility of developing scientifically credible methods for assessing such processes. It is our suspicion that there is considerable ground unturned ahead of us.

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Footnotes

[1]Paper presented at annual meetings of the American Psychological Association, Toronto, Canada, August, 1978.

[2]Preparation of this manuscript was supported in part by Grant MH29160 from the Center of Studies in Crime and Delinquency, National Institutes of Mental Health, to the second author. The authors are deeply indebted to a large number of colleagues who have assited in the study reported here. Most notably Becky Mulholland for her hasty typing of the manuscript and Jeana Lawrence for the preparation of figures. In addition, thanks are due John Jeppesen, Winnie Griffieth, Marianne Lebeuf, Tina Mitchell, Jim Emshoff, and Julie Parisian.

[3]Obviously the outcome results from this project on many of the other variables except those described in this substudy may be of interest to the reader. Outcome results on official recidivism, school performance, self-report delinquency and a variety of other measures are available from the authors upon request.

[4]The intervention monitoring scales consist of a set of approximately 200 items. Due to the length of this document, they are not included but are available upon request from the authors. All items were scaled on five point Likert type dimensions and included both estimates of frequency and duration of activity queried about.

Table 1

Intervention Survey

1. Lack of Complaints/Positive Involvement. This scale reflects the extent to which the youth and volunteer get along and the degree to which there are not problems in carrying out the intervention. Example item: To what extent does the youth like what the volunteer is doing in general?" and "Volunteer can't find things the youth likes to do." This scale consists of 23 items and has a scale alpha of .86.

2. Volunteer/Target Involvement. This scale includes three items reflective of the amount of time the volunteer spends carrying out the intervention. These three items have a scale alpha of .53.

3. Parental Involvement. This scale is aimed at assessing the extent to which the parents are part of or included in the intervention and the extent to which a relationship was established between the volunteer and the parents. Example item: "To what extent does the volunteer involve the parents in the planning of the intervention?" This scale contains 12 items and has a scale alpha of .85.

4. Peer Involvement. This scale reflects the degree to which the friends of the youth were included in the intervention. Example item: "How often does the volunteer involve the youth's friends in recreational activities?" This scale consists of six items which have a scale alpha of .81.

5. Recreational Activities. This scale reflects the extent of recreational activities as a part of the intervention. The basic dimension is the frequency of activities that the volunteer and youth engage in together. Example item: "How often do the youth and volunteer participate in purchased recreational activities together?" The scale consists of three items and has a scale alpha of .51.

6. Family: Focus on Changing Youth. This scale and the next were aimed at assessing the extent to which the intervention is concerned with changes in the family area. This scale reflects how much of that effort is directed at changes in the youth's behavior per se. Example item: "To what extent is the intervention focused on the youth doing more household chores?" This scale consists of five items which have a scale alpha of .71.

7. Family: Focus on Changing Parents. This scale has a similar purpose to number six but is aimed at the extent to which the home intervention was focused on getting the parents to do things differently. Example item: "To what extent is the intervention focused on getting the parents to improve their household rules?" This scale consists of eight items which have a scale alpha of .86.

8. School: Focus on Changing Youth. This scale is aimed at assessing intervention activities which focus on the school behavior of the youth. The basic dimension is the frequency of activity in this area. Example item: "To what extent is the volunteer trying to get the youth to do more homework?" This scale consists of eight items which have an alpha level of .86.

9. School: Focus on Changing School. This scale is focused on the extent to which the volunteer engages in activity aimed at bringing about improvement in the school area, but the efforts are directed towards the actions of the school staff rather than the youth per se. Example item: "How often does the volunteer talk to teachers?" This scale consists of five items which have an alpha level of .70.

10. Job Seeking. This scale reflects the extent to which the intervention involves attempts to obtain employment for the youth. The basic dimension was frequency of actions or frequency of planning for actions. Example item: "How often does the volunteer take the youth for job interviews?" This scale consists of seven items which have an alpha of .86.

11. Legal System Involvement. This scale reflects the extent to which the volunteer became involved in the juvenile justice system as part of the work with the youth. Example item: "Has the volunteer assisted the youth in getting a lawyer?" This scale consists of 11 items which have a scale alpha of .77.

12. Adherence to Behavioral Contracting Model. This scale was developed to reflect volunteer actions representative of the behavioral contracting model of intervention. They represent nine sequential items beginning with assessment for contracting and ending with instruction of the youth and significant others in the contracting method. This scale demonstrates a scale alpha of .95.

13. Adherence to Child Advocacy Model. This scale consists of items reflective of volunteer actions representative of the advocacy model of intervention. Namely, to what extent was the volunteer intervening on behalf of the youth to gain needed resources. Example item: "To what extent has the volunteer specified individuals in control of needed resources?" This scale consists of ten items which have a scale alpha of .82.

14. Adherence to Relationship Skills Model. This scale consists of seven items reflective of relationship skills representative of the relationship model of intervention. Namely, to what extent was the volunteer intervening with the youth per se in line with the sequential relationship based problem solving model. Example item: How much effort does the volunteer put into trying to understand the youth's feelings, beliefs, values, etc. The seven items of this scale have an alpha of .84.

TABLE 2

ANALYSIS OF VARIANCE

ADHERENCE TO BEHAVIORAL CONTRACTING MODEL SCALE

SOURCE	DF	MS	F	PROB	ω^2
CONDITION (A)	3	11.70	11.56	<0.0005	.28
SUCCESS/FAILURE (B)	1	4.55	4.49	.04	.03
A x B	3	3.12	3.08	.037	.05
SUBJECTS (C)	46	1.02			
TIME (D)	2	.86	8.84	<0.0005	.01
A x D	6	.35	3.58	.003	.01
B x D	2	1.42	14.54	<0.0005	.02
A x B x D	6	.50	5.12	<0.0005	.02
C x D	92	.01			

TABLE 3

ANALYSIS OF VARIANCE

ADHERENCE TO CHILD ADVOCACY MODEL SCALE

SOURCE	DF	MS	F	PROB	w^2
CONDITION (A)	3	7.50	4.38	.009	.13
SUCCESS/FAILURE (B)	1	1.83	1.07	.307	
A x B	3	.82	.48	.699	
SUBJECTS (C)	46	1.71			
TIME (D)	2	.006	.02	.976	
A x D	6	.12	.47	.832	
B x D	2	.13	.54	.585	
A x B x D	6	.19	.76	.601	
C x D	92	.25			

Table 4

Analysis of Variance

Adherence to Relationship Skills Model Scale

Source	df	MS	F	Prob	w^2
Condition (A)	3	.84	.500	.684	
Success/Failure (B)	1	.02	.014	.905	
A x B	3	.45	.267	.849	
Subjects (C)	46	.17			
Time (D)	2	.80	6.088	.003	.01
A x D	6	.32	.244	.961	
B x D	2	.22	.165	.848	
A x B x D	6	.46	.347	.910	
C x D	92	.13			

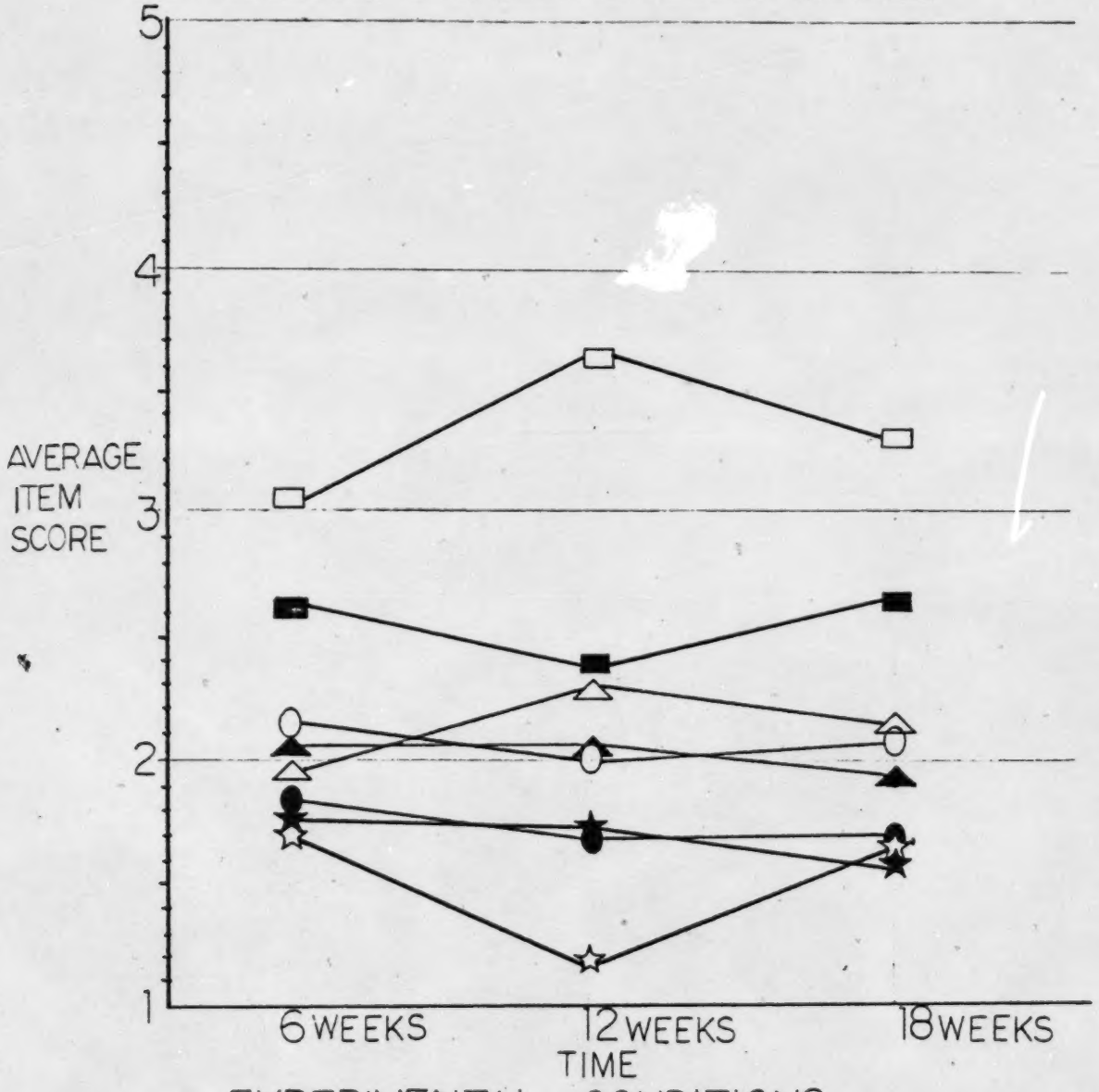
TABLE 5

ANALYSIS OF VARIANCE

VOLUNTEER/TARGET INVOLVEMENT SCALE

SOURCE	DF	MS	F	PROB	w^2
CONDITION (A)	3	1.034	.900	.449	
FAILURE/SUCCESS (B)	1	.913	.794	.377	
A x B	3	2.149	1.870	.148	
SUBJECTS	46	1.150			
TIME (C)	2	1.898	7.838	.001	.03
A x C	6	.307	1.269	.279	
B x C	2	1.638	6.765	.002	.03
A x B x C	6	.910	3.759	.002	.04
SUBJECTS x TIME	92	.242			

FIGURE 1
ADHERENCE TO CHILD ADVOCACY MODEL



EXPERIMENTAL CONDITIONS

	SUCCESS	FAILURE
RELATIONSHIP GROUP	★	☆
ACTION GROUP	■	□
LARGE GROUP	●	○
SMALL GROUP	▲	△

FIGURE 2
ADHERENCE TO BEHAVIORAL CONTRACTING MODEL

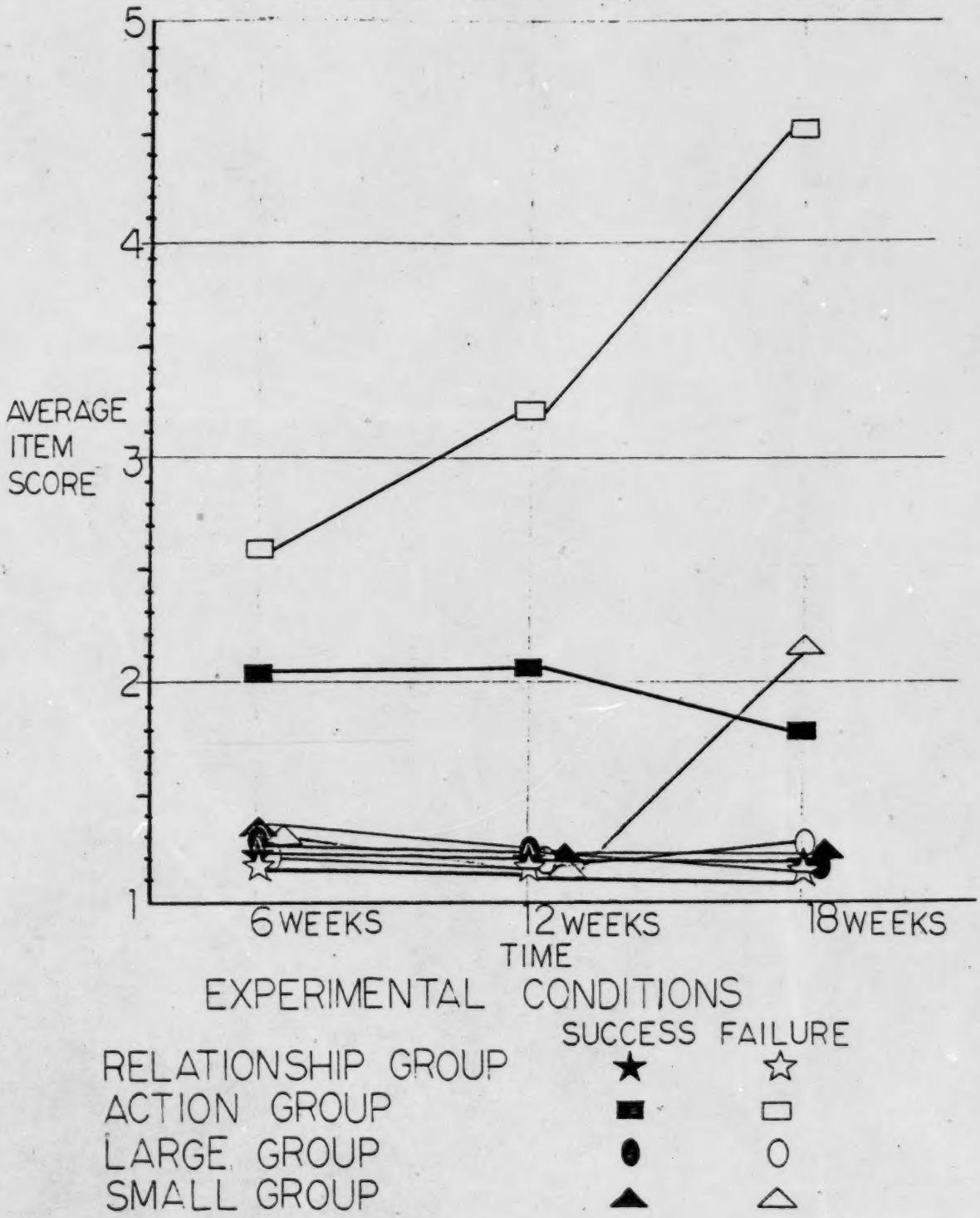


FIGURE 3
ADHERENCE TO RELATIONSHIP SKILLS MODEL

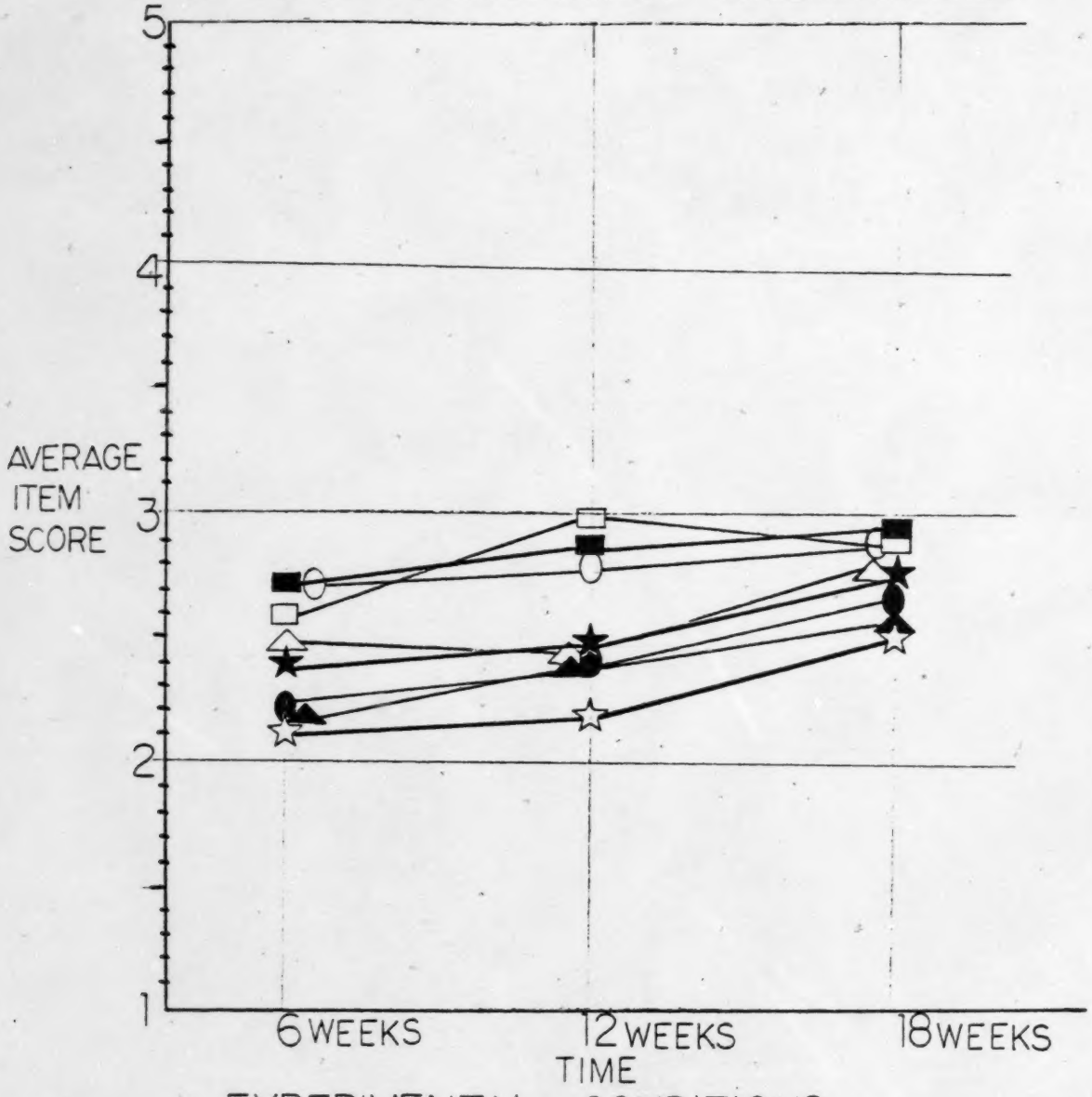


FIGURE 4
VOLUNTEER/TARGET INVOLVEMENT